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[54] DEPTH-RESOLVED SPECTROSCOPIC OPTICAL COHERENCE TOMOGRAPHY

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[52] **U.S. Cl.** **356/345**; 356/346; 356/357; 356/360

[58] **Field of Search** 356/345, 346, 356/357, 360

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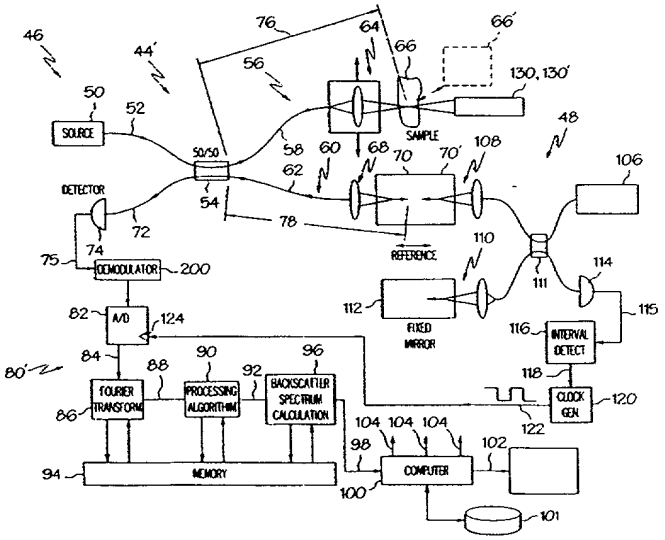
[57] **ABSTRACT**

A method is described for determining depth-resolved backscatter characteristics of scatterers within a sample, comprising the steps of: acquiring a plurality of sets of cross-correlation interferogram data using an interferometer having a sample arm with the sample in the sample arm, wherein the sample includes a distribution of scatterers therein, and wherein the acquiring step includes the step of altering the distribution of scatterers within the sample with respect to the sample arm for substantially each acquisition; and averaging, in the Fourier domain, the cross-correlation interferogram data, thereby revealing backscattering characteristics of the scatterers within the sample.

15 Claims, 18 Drawing Sheets



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